

IN THE CLAIMS

1. (currently amended): A water treatment and pressurization system for the adiabatic cooling of comburent air destined for plants using gas turbines (15), run by measuring, control and regulation units, said water treatment and pressurization system comprising a lifting and pressurizing station (16) ef for vaporization water at a varying flow-rate for a maximum operating pressure, preferably up to 120 bar, said pressurizing station (16) being associated with a series of nozzles (20) situated on nozzle-holder ramps (12) downstream of which there is at least one housing unit (144) for humidity and temperature probes (52-55), wherein said pressurizing station (16) has, as pumping unit, one or more pumps (22), each equipped with a continuous electric-electronic inverter (38, 38a) for the regulation of the rotation rate, said pumps (22) being automatically operated by an automatic measurement and control system (41, 42).

2. (original): The water treatment and pressurization system according to claim 1, characterized in that said system is installed and/or integrated in both newly constructed and installed and also in already existing auxiliary plants for gas turbines.

3. (canceled)

4. (currently amended): The treatment and pressurization system according to claim 1, characterized in that said housing unit (44) comprises a chamber (51) which houses measuring and control units, wherein said chamber (51) is positioned horizontally or vertically ~~in a transit canalization or on or in~~ duct (14) of comburent air, said chamber (51) being associated with external concentric

container element ([s]) (45) and internal concentric container element ([,]) (48), both equipped with a number of holes (47, 50), arranged in an out-of-axis sequence with suitable dimensions for the passage of comburent air, wherein the external concentric container element (45) is fixed and the internal concentric container element (48) rotates on its own axis.

5. (currently amended): The treatment and pressurization system according to claim 4, characterized in that the moveable container element (48) is equipped with an engine (49), coupled with a rotation regime reducer, whose function is to allow a sequential flow of comburent air to the measuring units.

6. (currently amended): The treatment and pressurization system according to claim 4 or 5, characterized in that the fixed container element (45) is associated with one or more measuring units (52-55), situated having at its the end of said fixed container element (45), as well as with a fan (56), that is positioned downstream of said measuring units, for the suction of the sample of comburent air.

7. (canceled)

8. (canceled)

9. (currently amended): The water treatment and pressurization system according to claim 1, characterized in that said lifting-and pressurizing station (16) is equipped with at least one pair of parallel pumps (22) each provided with a series of components which, on the suction side of the pump (22), consist of a manual interception valve (26) for the exclusion of the water feeding, an electromagnetic valve (27) of the on/off type, upstream of a filter (28) and a minimum pressure

manostat (29), and a manometer (30) for the analogical reading of the feeding pressure, and on the pressing pressure side of the pump (22) there is a manometer (32) for controlling the pressurization state, together with a pre-calibrated safety valve (33) for the protection of the maximum allowable operating pressure plant, a hydraulic accumulator (34) for compensating for the pressure differences, a three-way by-pass valve (35), calibrated at the maximum operating value, a three-way valve (36), inserted downstream and in sequence with the previous three-way bypass valve (35), a maximum/minimum pressure manostat (37), and also having a flexible connections connector (31) to that connects a the water conveyor duct (25) and each pump (22) to ramp-holder collectors (39).

10. (currently amended): The water treatment and pressurization system according to claim 1, characterized in that the quantity of water sent to the nozzles and vaporized thereby can be continuously varied very, according to the necessities of the measuring, regulation and control units envisaged in the present cooling system.

11. (currently amended): The treatment and pressurization system according to claim 1, characterized in that said housing unit (144) comprises a chamber (151) which houses measuring and control units (52-55), wherein said chamber (151) consists of side panels (57, 58, 59 and 60) and end plates (61 and 62), a front plate (61) equipped with holes (70a) associated with holes (70b) situated in a fixed plate (71) positioned inside the chamber (151), in which said holes (70a) are connected by means of flexible tubes (72) to the a duct (14) from which air samples are removed in different points of the duct section, and having there also being a rotating disk (73), equipped with at least one hole (70c) which alternatively connects

at least one of said flexible tubes (72) to the chamber (151) and the duct (14).

12. (original): The treatment and pressurization system according to claim 11, characterized in that it also comprises an equalizer panel (64) positioned in correspondence with the arrangement of outgoing tubes from the humidity and temperature probes (52, 53, 54 and 55).

13. (currently amended): The treatment and pressurization system according to claim 12, characterized in that it has also envisages, downstream of said equalizer panel (64), a perforated sheet (63) which acts as an equalizer panel before the connection to a suction fan (56) and re-conveying of the comburent air samples in a duct (14) downstream of said humidity and temperature probes (52-55).